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R-1179-NYC
DECEMBER 1972

Two Counts of Welfare in New York City: A Comparison of City and Census Data for 1969

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PREFACE

One of the objectives of The New York City-Rand Institute is to improve the use of data in urban policy analysis. The widespread interest in the problem of public assistance suggests that welfare information in particular be subject to scrutiny.

This Report is a preliminary look at the welfare information contained in the 1970 census of population for New York City. The analysis was undertaken in the course of doing research for the City's Human Resources Administration. Our findings suggest that there may be serious problems in using census data for analyzing the welfare population of New York City.

Helpful suggestions on both the content and the form of this Report were received from David Lyon, Peter Kolesar, John Jennings, Edward Blum, and Ira S. Lowry at The New York City-Rand Institute, and from Stephen Leeds and other staff of the New York City Human Resources Administration.

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SUMMARY

The 1970 census of population undercounted the number of welfare cases in New York City during 1969 by 40 percent. The census also underestimated the amount of welfare income received in New York City during 1969 by 40 percent. The income underestimation is almost entirely due to the undercount of welfare cases, rather than to an underestimate of the average annual grant per case. There is no available evidence to indicate whether the undercount of cases was caused by a failure to survey part of the welfare population or by failure of welfare recipients to admit that they received welfare income. There is evidence, however, that individual welfare cases were more severely undercounted than family welfare cases.

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I. INTRODUCTION

This Report compares United States Census estimates of the amount of public assistance (welfare) in New York City during 1969 with estimates computed from New York City's Human Resources Administration statistics. Two measures of the amount of welfare are discussed: (1) total welfare income, i.e., total welfare grants during 1969, and (2) total number of cases receiving welfare income during 1969. The comparison of City and census estimates of the total amount of welfare income during 1969 is a direct comparison of published statistics, and leads to the unambiguous conclusion that the census estimate is 41.1 percent less than the City statistic.

Comparing City and census estimates of the number of welfare cases during the year 1969 is complicated by the need to translate published statistics on both sides into "cases per year." The census published counts of families and unrelated individuals receiving welfare income, but their sum is not exactly equal to the number of cases because some families can have more than one welfare case (for example, daughter and children receiving Aid to Dependent Children assistance, and her mother receiving Old Age Assistance). On the other hand, the City publishes counts of cases receiving assistance each month, but it does not publish a count of the number of separate cases that occur during a year. However, both these estimation problems can be solved, and the resulting conclusion is that the census undercounted the number of welfare cases during 1969 by at least 39.0 percent.

This discrepancy between the City and census estimates of the amount of welfare is not due to different definitions of welfare. The census defines welfare income as " ... cash receipts of payments under the following public assistance programs: Aid to Families with Dependent Children, Old Age Assistance, General Assistance, Aid to the Blind, and Aid to the Permanently and Totally Disabled."* New York City's definition

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**General Social and Economic Characteristics: New York*, PC(1)-C34 NY, Bureau of the Census, 1972. Appendix B -- "Definitions and Explanations of Subject Characteristics," p. App. 26.

of welfare caseload consists of seven categories of assistance: Aid to Dependent Children, Temporary Aid to Dependent Children, Old Age Assistance, Home Relief Non-Veteran, Veteran Assistance, Aid to the Blind, and Aid to the Disabled.* These two definitions of welfare are identical except for the fact that the City's definition includes Veteran Assistance, while the census explicitly (in the paragraph following the above quote) classifies "veteran's payments" in "income from all other sources." While the City usually includes Veteran Assistance cases in its Home Relief, i.e., General Assistance category, for reporting purposes, it does publish separate summary information on Veteran Assistance. In this Report, therefore, Veteran Assistance cases and payments have been subtracted from the cited City estimates of welfare caseload and grants. However, since Veteran Assistance accounts for less than one percent of New York City's welfare caseload and welfare payments, leaving it in would not have substantially changed the conclusions.

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*_Monthly Statistical Report_, City of New York Department of Social Services, January 1969, pp. 4-5.

II. CITY ESTIMATES

The City estimate of total welfare grants is published monthly in the Department of Social Service's *Monthly Statistical Report*. Adding up the 12 reported amounts for 1969, excluding Veteran Assistance grants, yields an $883 million annual total of welfare grants that should equal the total welfare income reported to the 1970 census.(See Table 1.)

The number of distinct cases that received welfare during 1969 cannot be obtained from City data as directly or as exactly as can total grants. The problem is that only monthly totals are published, and there is no direct indication of the amount of overlap with other months. Consulting Table 1, we see that during January, 1969, there were 364,000 welfare cases receiving assistance in New York City. During 1969, this monthly total gradually rose until during December, 1969, there were 388,000 cases receiving assistance. So the reported monthly totals show that at least 388,000 separate cases received welfare during 1969. However, the total number of separate cases receiving assistance during all 12 months of 1969 is considerably higher than the number receiving assistance in any one month. This is due to caseload turnover.

To get a complete estimate of the separate cases during 1969, information on caseload turnover must be added to the information on cases per month. A reasonable, and slightly conservative, method of estimating the annual number of cases is to start with the 364,000 cases receiving assistance in January, 1969, then add the 168,000 case openings during the year, and finally, subtract the 55,000 reopenings to avoid double counting. As Table 1 shows, this yields an estimate of 477,000 cases receiving welfare during 1969. This estimate is slightly smaller than the true number of cases during 1969, since not all the reopenings are of cases that closed in a prior month of 1969, and therefore, the final step of the estimation process subtracts somewhat too many cases. Ensuring that the City estimate of the number of cases that were active at any point in time during 1969 is conservative gives the census the benefit of any doubt in the following discussion of the amount of census underestimation.

Table 1

CITY ESTIMATES OF THE AMOUNT OF WELFARE IN NEW YORK CITY DURING 1969

Month in 1969	Cases Receiving Assistance[a]	Total Grants[a]	Total Case Openings[b]	Total Case Reopenings[c]
January	364,358	$ 69,605,044	17,745	5,636
February	364,630	67,148,616	13,922	4,262
March	370,889	91,015,698	15,807	4,745
April	372,673	70,801,148	13,994	4,341
May	373,137	69,706,389	13,620	4,434
June	374,286	72,047,654	13,159	4,110
July	376,143	70,276,382	13,650	4,149
August	379,099	75,040,841	13,862	5,032
September	381,577	73,286,330	13,531	4,757
October	384,124	74,371,557	14,099	4,935
November	383,811	74,738,105	10,967	3,869
December	387,673	75,019,518	13,681	4,805
Annual total	477,320[d]	$883,057,782	168,037	55,075

SOURCE: Division of Statistics, New York City Department of Social Services. Cases receiving assistance and total grants obtained from *Monthly Statistical Reports* for 1969. Case openings and reopenings obtained from unpublished official records.

[a]Excludes Veteran Assistance.

[b]Total case openings is the sum of additions to all assistance categories, excluding additions due to transfers between assistance categories.

[c]Reopenings are openings of cases that received prior assistance in New York City in the same assistance category.

[d]This estimate of the total number of *separate* cases receiving assistance during 1969 was obtained by starting with the 364,358 cases that received assistance in January, 1969, adding the 168,037 case openings that occurred during 1969, and then subtracting the 55,075 openings that were reopenings. If all the reopenings were of cases that had closed during 1969, then the estimate would be exact. Since some of the reopenings presumably are of cases that closed before 1969, this estimate of cases receiving assistance in 1969 is a slight underestimate, and gives the census the benefit of any doubt.

III. CENSUS ESTIMATES

Obtaining the census estimate of the total amount of welfare income during 1969 is as direct a process as was obtaining the City estimate. The census published estimates of the number of families* and the number of unrelated individuals* who received welfare during 1969. Corresponding to each of these counts, they also published the average annual welfare income. Multiplying the two counts by the respective average incomes and summing the results produces the census estimate of total welfare income. Table 2 shows that this estimate is only $520 million.

Adding the 199,000 families that the census reported received welfare in 1969 to the 76,000 unrelated individuals reported to have received welfare gives us a preliminary estimate that the census counts imply that there were 275,000 separate welfare cases in New York City during 1969.(See Table 2.) However, the number of welfare cases implied by the counts is actually slightly higher than this sum because some of the families receiving welfare contain more than one welfare case. This happens whenever two or more welfare cases, whose members are related to each other, live in the same household. Using City data on the structure of welfare households, Appendix A shows that the number of welfare cases that get merged with other cases in the census count of families receiving welfare is approximately equal to 8.4 percent of the number of families receiving welfare. Thus, the complete number of cases implied by the census counts is equal to 1.084 times the number of families receiving welfare plus the number of unrelated individuals receiving welfare. Table 2 shows that this estimate of welfare cases based on census counts is only 291,000 cases.

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*In the 1970 census, a *family* consists of a household head and one or more other persons living in the same household who are related to the head by blood, marriage, or adoption; all persons in a household who are related to the head are regarded as members of his (her) family. An *unrelated individual* is a member of a household who is not related to anyone else in the household or a person living in group quarters who is not an inmate of an institution. A *household* includes all the persons who occupy a group of rooms or a single room which constitutes a housing unit.

Table 2

CENSUS ESTIMATES OF THE AMOUNT OF WELFARE IN NEW YORK CITY DURING 1969

Income Accounting Unit	Number Receiving Welfare	Mean Welfare Income	Total Welfare Income
Families	198,697	$2,114	$420,045,458
Unrelated individuals	75,839	$1,320	$100,107,480
Families plus unrelated individuals	274,536	$1,894	$520,152,938
Welfare cases	291,226[a]	$1,786	$520,152,938

SOURCE: Bureau of the Census, U. S. Department of Commerce, 1970 Census of Population. *General Social and Economic Characteristics: New York.* PC (1)-C34 NY, Table 89, pp. 34-387 and also pp. 34-390.

NOTE: The census published the four numbers in the upper left-hand corner of this Table, the rest of the numbers were calculated from them.

[a]Because of multiple case families the number of families receiving assistance plus the number of unrelated individuals receiving assistance does not equal the total number of welfare cases implied by these welfare counts. Using information from special tabulations and surveys done for the New York City Department of Social Services in 1971, on the number of multiple case households and on the degree to which the recipients in these cases are related, we arrive at an estimate that 16,690 welfare cases were merged with families receiving assistance and not counted separately by the 1970 census. The total number of welfare cases implied by the 1970 census counts is, therefore, equal to the sum of 198,697 families receiving assistance, 75,836 unrelated individuals receiving assistance, and 16,690 additional cases in multiple case families. (See Appendix A for a detailed comparison of the City and census methods of counting welfare recipients.)

IV. CONCLUSIONS

Table 3 indicates that the 1970 census of population underestimated the number of welfare cases and the amount of welfare income in New York City during 1969. In both instances the census estimate was essentially 40 percent below the City estimate.

Table 3

AMOUNT OF WELFARE IN NEW YORK CITY DURING 1969: CITY VS. CENSUS INFORMATION

Amount of Welfare	Source of Information		Percent Underestimation by Census
	City	Census	
Total grants	$883,057,782	$520,152,938	41.1%
Total cases	477,320	291, 226	39.0%
Average annual grant per case	$1,850	$1,786	3.5%

SOURCE: Tables 1 and 2.

The $883 million the City says it gave out as welfare grants in 1969 and the $520 million the census reported as welfare income were obtained directly from published statistics. There is no ambiguity about the existence of a 41.1 percent underestimate of welfare income by the Bureau of the Census.

City statistics show that there were at least 477,000 welfare cases in 1969, while census statistics indicate that there were only 291,000 welfare cases in the same time period. Again, there is no ambiguity about the conclusion that the count of welfare cases by the census is at least 39.0 percent below the City's count.

In Appendix C these findings are expressed in terms of percentages of total New York City income and population during 1969. The results are that City records show 2.9 percent of New York City's personal income coming from welfare grants, and 16.1 percent of New York City's population receiving welfare assistance; while the corresponding percentages derived from census figures are only 1.8 percent of personal income and 11.1 percent of population.

How could such large discrepancies between City and census information have occurred? In calling the discrepancies underestimates, we are implicitly, and reasonably, assuming that the City does not report welfare grants it did not make or cases that do not exist. It is possible, of course, that there may be some individuals or families who receive double assistance checks, either through administrative error or through a fraudulent second application at a different welfare center. The existence of such "second cases" and checks would probably not be admitted to the census, and so this possibility could account for some of the discrepancy between the City and census estimates of both number of cases and amount of welfare income. However, current estimates of the number of "second cases" on the welfare rolls indicate that the percentage is far too small to significantly affect the City's counts of total caseload and grants, and consequently, it is too small to significantly affect this Report's conclusions. Note that the question of eligibility for welfare does not enter this discussion at all. Both City and census are counting existing recipients regardless of whether they were correctly granted welfare assistance or not.

Also, the easy answer on the census side--namely, statistical sampling error--is not credible either. The census information does come from a 20 percent sample, so the question of sample variability exists. However, 20 percent of New York City is a very large sample, and since statistical sampling errors are related to the absolute size of a sample they are negligible in this instance. Nor can the fact that City and census handle migration differently account for the discrepancies. The census counted persons living in New York City in April, 1970, who had been on welfare in any jurisdiction during 1969; while New York City's Department of Social Services

counted all those who, at any time in 1969, lived in New York City and were on the New York City welfare rolls. Since inmigration of welfare recipients probably at least equalled outmigration during the period from January, 1969, through April, 1970, this technical difference between the universes counted by City and census makes little practical difference.

No, we are faced with the kind of error that the technical appendices to census reports fail to discuss adequately: systematic bias resulting either from failure of the census to account for the entire population or failure of respondents to give the correct information. Respondents who admitted to being welfare cases seem to have been willing to report the welfare grant correctly, since Table 3 shows that the census did not significantly underestimate the amount of welfare income per case. However, it is possible that some respondents either forgot they were on welfare during 1969 or did not want to tell the census about it. It is also possible that the census simply did not find some welfare recipients who were too mobile or too unregistered on standard reference lists to be easily found. No available data, however, permits us to distinguish between the respondent failure and census failure theories. As Appendix B indicates, however, there is evidence that individual welfare cases were more severely undercounted than family welfare cases. This lends weight to the theory that the census was unable to find all welfare recipients since individuals are presumably harder to find than families.

Commenting* on a draft of this Report, George H. Brown, Director of the Bureau of the Census, not only did not disagree with the underestimation finding for New York City, but indicated that one of the census's researchers** has shown that the income part of the finding

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*Letter to author from George H. Brown, Director of the Bureau of the Census, dated November 9, 1972.

**Mitsuo Ono, Bureau of the Census, in his paper "Preliminary Evaluation of 1969 Money Income Data Collected in the 1970 Census of Population and Housing," shows that only 61 percent of the welfare income in New York State during 1969 is reported in the 1970 census. For the United States as a whole, 69 percent of the welfare income was reported. The corresponding percentages for the other States range from a low of 55 percent in Iowa to a high of 101 percent in Indiana.

is true for almost all States. Brown's explanation of why the underestimate happened is that there is a "definite tendency for respondents to deny receiving income from public assistance." He mentioned that a series of very small-scale studies (which did not include any respondents in New York City) indicate a denial rate among public assistance recipients ranging from 10 to 27 percent. Unless the denial rate is higher in New York City, this explanation only accounts for part of the 40 percent underestimate found in this Report.

In addition to the finding that the census underestimated welfare income and cases, two other conclusions flow from this Report's comparison of City and census statistics. The first is that the census could check its numbers against other government records before publication. Why rely exclusively on sample surveys where complete accounting records exist? Since this suggestion is likely to raise the question of who pays for all the checking, the second conclusion is that the census should at least warn its users, in the technical appendices to its reports, about the nonsampling errors of its surveys. Currently, the appendices give little warning* that the problem exists or any discussion of which items of information are most likely to suffer from systematic biases.

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*Appendix B of General Social and Economic Characteristics: New York, PC(1)-C34 NY, does have a section entitled "Limitations of the Data" starting on page App. 27. The relevant passages are: (1) "Since questionnaire entries for income are frequently based on memory and not on records, many persons tend to forget minor or irregular sources of income, resulting in the underreporting of income," (2) "Another type of problem found involved nonreporting of income data. Where complete income information was not reported, elaborate editing and allocation procedures were devised to impute appropriate values (either 'None' or positive or negative dollar amounts) for the missing entries." Neither of these statements would lead one to anticipate an error of the magnitude of 40 percent. In fact, the mention of "elaborate editing and allocation procedures" gives the impression that any problems are largely under control.

Appendix A

CITY VS. CENSUS SYSTEMS OF COUNTING WELFARE RECIPIENTS

One must look at counts of welfare recipients in order to go beyond the comparison of City and census estimates of total welfare income. This presents difficulties since the City and census use different accounting systems in making their welfare counts. The City counts welfare cases by six assistance categories,* while the census counts families and unrelated individuals receiving welfare. The City counts of welfare cases can be divided into counts of family cases (ADC, ADCU, and HR families) and individual cases (HR individuals, OAA, AD, and AB) because all categories except Home Relief contain only family or only individual cases,** and because the number of family and individual Home Relief cases is published in the Department of Social Service's *Monthly Statistical Report*. However, it is only approximately true that what the City calls family cases are what the census calls families receiving assistance, and that what the City calls individual cases are what the census calls unrelated individuals receiving welfare. Some individual cases live with relatives and appear in the census counts of families receiving welfare. Other individual cases live with relatives who are also on welfare as a separate case, and in such an instance the two welfare cases are counted by the census as one family receiving welfare. Similarly, some family cases live with a related family which is also on welfare, and the two family cases are counted by the census as one family receiving welfare.

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*Old Age Assistance (OAA), Aid the the Blind (AB), Aid to the Disabled (AD), Aid to Dependent Children (ADC), Aid to Dependent Children with Unemployed Fathers (ADCU), and Home Relief (HR).

**This division of welfare assistance categories into ones containing family cases and ones containing individual cases was strictly true in 1969. To do the division for any later year would be slightly more complicated since starting in July, 1970, the OAA, AD, and AB categories could contain more than one person per case. The extra person could be added to these Federal aid categories if determined to be "essential" to the welfare of the primary welfare recipient.

None of these instances where the City and census counts of welfare recipients differ occur often enough to make any large difference in the conclusions one draws about the amount of census undercount of welfare recipients. However, in order to show that the accounting system differences are minor relative to the size of the undercount, the analysis in this Appendix has been used in this Report to remove the effects of the accounting system differences almost entirely. Information on the household structure of welfare recipients is used to infer the relationship between the City accounting system and the census accounting system. This relationship is then used throughout this Report to convert census counts of families and unrelated individuals receiving welfare assistance into the implied counts of family welfare cases and individual welfare cases.

Table A-1 takes information on the household structure of welfare cases and, first, translates it into counts of family and individual cases; then, second, translates it into census counts of welfare recipients. Welfare cases are counted by the census either as a family receiving welfare, or as an unrelated individual receiving welfare, with some individual cases being counted as families receiving welfare because they live with relatives. In addition, some welfare cases in two case households are merged with related cases and not counted separately. The information in Table A-1 permits us to assess the magnitude of these discrepancies between the City and census accounting systems. Taking the summary information on the bottom row of Table A-1 and reformatting it into Table A-2, we find that 16.8/216.7 or 7.8 percent of families receiving welfare actually consist of an individual welfare case. We also find that 11.4/216.7 or 5.2 percent of families receiving welfare are merged with other families receiving welfare and are not counted separately, and that 6.8/216.7 or 3.2 percent of the families receiving welfare contain, in addition to a family case, an individual welfare case that the census does not count separately.

These findings first of all permit us to see that the magnitude of the discrepancies between the City and census accounting system is not very large. The number of cases not counted separately by the census is only 18.2/364.3 or 5.0 percent. And the number of individual cases counted as families receiving assistance is only 16.8/153.0 or 11 percent.

Table A-1

COMPARISON OF CITY AND CENSUS SYSTEMS OF COUNTING WELFARE RECIPIENTS, NEW YORK CITY

(All Counts in Thousands, January 1969)

Type of Household	City Counts						
	Family Cases			Individual Cases			
		Assignment to Census Counts			Assignment to Census Counts		
	Total	Families Receiving Welfare	Merged with Families Receiving Welfare and Not Counted Separately	Total	Unrelated Individuals Receiving Welfare	Families Receiving Welfare	Merged with Families Receiving Welfare and Not Counted Separately
Single Case Households[a]							
1 family case	181.9	181.9	0.0	0.0	0.0	0.0	0.0
1 individual case[b]	0.0	0.0	0.0	136.7	123.0	13.7	0.0
Multiple Case Households							
2 family cases[c]	24.0[c]	14.3	9.7	0.0	0.0	0.0	0.0
2 individual cases[d]	0.0	0.0	0.0	12.6	6.4	3.1	3.1
1 family case, 1 individual case[e]	2.0	2.0	0.0	2.0	0.0	0.0	2.0
3 or more cases[f]	3.4	1.7	1.7	1.7	0.0	0.0	1.7
Total	211.3	199.9	11.4	153.0	129.4	16.8	6.8

SOURCES and NOTES on following page.

Table A-1 (Cont'd.)

SOURCE: Distribution of welfare households by case structure from a December 1971 special tabulation of the New York City Human Resources Administration's Master File on Public Assistance Programs. Assignment to census count categories done using information from an October 1971 survey by the State Department of Social Services of 1 percent of all welfare case folders. Caseload totals from January 1969 *Monthly Statistical Report*, City Department of Social Services.

[a]Single HR case households allocated to family cases and individual cases in proportion to total HR cases; namely, 24.4 percent family cases, 75.6 percent individual cases.

[b]The case folder survey showed that 21 percent of individual case recipients live in households with nonrecipients. In about half of these households the nonrecipients can be expected to be related to the recipients, meaning that about 10 percent of the individual cases are counted by the census as family cases.

[c]In about 80 percent of these households the two families can be expected to be related, and in these instances, the census would count them as one family welfare income.

[d]In about 50 percent of these households the two individuals can be expected to be related, and in these instances, the census would count them as one family receiving welfare income.

[e]All cases in household are assumed to be related.

[f]These households are assumed to have, on the average, two family cases and one individual case, all related.

Table A-2

SUMMARY COMPARISON OF CITY
AND CENSUS SYSTEMS OF COUNTING
WELFARE RECIPIENTS, NEW YORK CITY
(Counts in Thousands, January 1969)

City Counts		Assignment to Census Counts		
Type of City Count	Total	Families Receiving Welfare	Unrelated Individuals Receiving Welfare	Merged With Families Receiving Welfare and Not Counted Separately
Family cases	211.3	199.9	0.0	11.4
Individual cases	153.0	16.8	129.4	6.8
Total	364.3	216.7	129.4	18.2

SOURCE: Table A-1.

Second, these results permit us to construct formulas that convert census counts into the implied counts of welfare cases. Using the notation:

FC = Family welfare cases,
IC = Individual welfare cases,
TC = Total welfare cases,
FR = Families receiving welfare,
UIR = Unrelated individuals receiving welfare,

We can rewrite the information in Table A-2 in three equations:

$$FC = FR - \frac{16.8}{216.7}\ (FR) + \frac{11.4}{216.7}\ (FR),$$

$$IC = UIR + \frac{16.8}{216.7}\ (FR) + \frac{6.8}{216.7}\ (FR),$$

$$TC = FR + UIR + \frac{18.2}{216.7}\ (FR).$$

Then, performing the indicated divisions, we obtain formulas enabling us to transform census counts of families and unrelated individuals receiving welfare into the implied counts of welfare cases:

$$FC = FR - .078\ (FR) + .052\ (FR),$$

$$IC = UIR + .078\ (FR) + .032\ (FR),$$

$$TC = FR + UIR + .084\ (FR).$$

These formulas have been used in this Report, specifically in constructing Tables 2 and B-2, to estimate the number of welfare cases implied by census information.

Appendix B

FAMILY VS. INDIVIDUAL CASES

The finding that the census estimate of the number of welfare cases in New York City during 1969 is 40 percent less than the number indicated by City records can be extended by comparing the counts for family and individual cases. The census estimates of family and individual welfare cases come from the published counts of families and unrelated individuals receiving welfare, via the transformation established in Appendix A. The City estimates of family and individual welfare cases can be constructed from published data on the six assistance categories, with the only problem being the need to divide the openings and reopenings of Home Relief cases into family and individual components.

Table B-1 gives the derivation of the City estimates of the number of family and individual cases receiving welfare assistance in New York City in 1969. With the exception of Home Relief, the welfare assistance categories conveniently contain only family or only individual cases. For Home Relief, the City's *Monthly Statistical Report* distinguishes family from individual cases receiving assistance, but there is no data on Home Relief openings and reopenings by family and individual cases. In constructing the Table, therefore, Home Relief openings and reopenings during 1969 were allocated to family and individual cases in proportion to the number of cases receiving assistance in January, 1969. The method of estimating the number of *separate* family and individual cases receiving assistance during all the 12 months of 1969 is the same as was used in Table 1 to estimate the total number of cases. Cases receiving assistance during January, 1969, are the basic estimate to which case openings during 1969 are added and case reopenings during 1969 are subtracted. Subtraction of case reopenings prevents double counting, and since this correction is excessive, the resultant City estimates are somewhat below the true number of cases receiving assistance in 1969.

Table B-2 compares the City and census estimates of the number of family and individual welfare cases. Since additional assumptions had to be made, the conclusions about the percentage undercount of the individual

Table B-1

CITY ESTIMATES OF THE NUMBER OF
FAMILY AND INDIVIDUAL WELFARE CASES IN
NEW YORK CITY DURING 1969

Assistance Category	Cases Receiving Assistance in January 1969[a]	Total Case Openings in 1969[b]	Total Case Reopenings in 1969[c]	Cases Receiving Assistance in 1969[d]
ADC	178,967	55,049	17,083	216,933
ADCU	12,459	7,240	2,848	16,851
HR (families)	19,901	13,353[e]	5,548[e]	27,706
All families	211,327	75,642	25,479	261,490
HR (individuals)	61,462	41,240[e]	17,134[e]	85,568
AD	34,779	32,100	9,941	56,938
OAA	54,553	18,580	2,359	70,774
AB	2,237	475	162	2,550
All individuals	153,031	92,395	29,596	215,830
Total	364,358	168,037	55,075	477,320

SOURCE: Division of Statistics, New York City Department of Social Services. Cases receiving assistance obtained from *Monthly Statistical Report*, January, 1969. Case openings and reopenings obtained from unpublished official records.

[a]Excludes Veteran Assistance cases.

[b]Case openings are additions excluding additions due to transfers from other assistance categories.

[c]Case reopenings are openings of cases that previously received assistance in New York City in the same assistance category.

[d]These estimates of the number of separate cases that received assistance during 1969 were obtained by adding case openings during 1969 to cases receiving assistance in January, 1969, and then subtracting reopenings during 1969.

[e]Estimates obtained by distributing total HR openings and reopenings to family and individual cases in proportion to number of cases receiving assistance in January, 1969.

and family cases by the 1970 census are not as definitive as the conclusion that total cases were undercounted by 40 percent. However, it is clear that *the census percentage undercount of individual cases is about two times larger than the percentage undercount of family cases.* The specific estimates are that the census undercounted family cases by about 26 percent, and undercounted individual cases by about 55 percent.

Table B-2

FAMILY AND INDIVIDUAL WELFARE
CASES IN NEW YORK CITY DURING 1969:
CITY VS. CENSUS INFORMATION

Type of Case	Source of Information		Percent Underestimation by Census
	City	Census	
Family	261,490	193,531[a]	26.0%
Individual	215,830	97,695[a]	54.7%
Total	477,320	291,226[a]	39.0%

SOURCE: Tables A-1 and 2.

[a]Estimated from census counts of 198,697 families receiving welfare and 75,839 unrelated individuals receiving welfare by the transformations established in Appendix A.

Appendix C

PERCENTAGE AMOUNT OF WELFARE

Another way to summarize this Report's conclusions about City and census estimates of the amount of welfare is to convert the estimates into percents of New York City total personal income and total population. Such conversions require using additional census data and additional assumptions, especially to calculate the population percentages, but provided one does not take tenths of a percent too seriously, the results are valid.

The census reports* that in New York City in 1969 there were 2,058,943 families, earning a mean annual income of $11,639, with 3.32 persons per family. It also reports that there were 986,566 unrelated individuals, earning a mean annual income of $5,484. Consequently, the census estimate of total personal income in New York City during 1969 is: (2,058,943) ($11,639) + (986,566) ($5,484) = $29,374 million. And the census estimate of total New York City population is: (2,058,943) (3.32) + (986,566) = 7.822 million persons.

Converting the $520 million welfare income reported by the census and the $883 million welfare income reported by the City (see Table 3) into percentages of the $29,374 million total personal income, we conclude that *the census reports that 1.8 percent of New York City's personal income in 1969 came from welfare grants, while City records show that the correct figure is 2.9 percent.*

City records indicate (see Table C-1) that 1.258 million persons, or 16.1 percent of the total population, received welfare assistance in New York City during 1969. There is no direct census estimate of the number of persons receiving welfare assistance, because the census did not report the number of persons per welfare family. However, using the City data indicating 3.99 persons per family welfare case, we can convert the census

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**General Social and Economic Characteristics: New York*, PC(1)-C34 NY, Tables 89 and 90, pages 34-390 and 34-393.

Table C-1

CITY ESTIMATES OF THE NUMBER OF PERSONS
RECEIVING WELFARE ASSISTANCE IN NEW YORK CITY
DURING 1969

Assistance Category	Cases Receiving Assistance in 1969	Persons Per Case	Persons Receiving Assistance in 1969
ADC	216,933	3.75	813,499
ADCU	16,851	5.43	91,501
HR (families)	27,706	4.97	137,699
All families	261,490	3.99	1,042,699
HR (individuals)	85,568	1.00	85,568
AD	56,938	1.00	56,938
OAA	70,774	1.00	70,774
AB	2,550	1.00	2,550
All individuals	215,830	1.00	215,830
Total	477,320	2.64	1,258,529

SOURCE: Cases receiving assistance during 1969 obtained from Table B-1. Persons per case by assistance category obtained from *Monthly Statistical Reports* for 1969, Division of Statistics, New York City Department of Social Services.

estimates of total welfare cases (see Table B-2) into a census estimate that there were (193,531) (3.99) + 97,695 = 0.870 million persons receiving welfare assistance in 1969. This is only 11.1 percent of the total population.

Census figures imply that 11.1 percent of New York City's population received welfare assistance in 1969, while City records show that, in fact, 16.1 percent did.